

**ABSTRACT**

An optimizer/normalizer is used to generate optimized intermediate language representation of an input query, such as an XML input query. A method of optimization of an input query in intermediate language form includes receiving the input query, examining the nodes in a left-depth first manner to identify code patterns and node types which are subjects for optimization, tagging the identified code patterns until the intermediate language representation of the input query has been examined in its entirety, searching from the top of the intermediate language representation for tagged code patterns, and adjusting the tagged code patterns with improved code patterns to form an optimal representation for an input query. The input to the optimizer/normalizer is assumed to be an input query transformed into an intermediate language representation containing code patterns and nodes, each node having a respective node type.